Standardization of an immunochemistry staining to detect amyloid material in domestic species

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Objectives

- To review the current knowledge of the amyloidosis in domestic and wild animals.
- To investigate the current knowledge of the amyloidosis as a potentially transmissible disease.
- To standardize an immunochemistry staining to detect amyloid material.
- To evaluate the immunochemistry staining in different domestic and wild species.

Materials and methods

Selection of the species

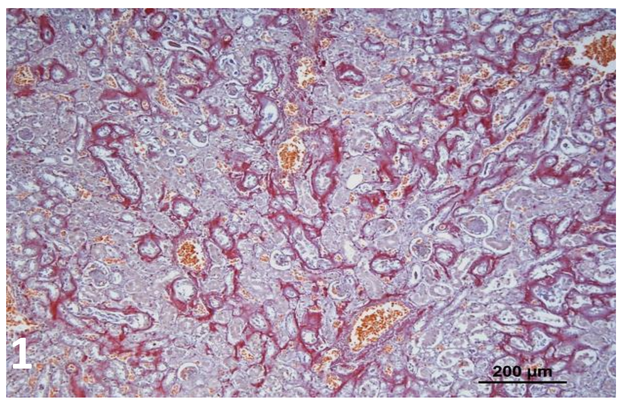
- *Falco peregrinus, Gazella dorcas, Bos primigenius, Capra aegagrus, Ovis aries, Felis silvestris* and *Canis lupus*

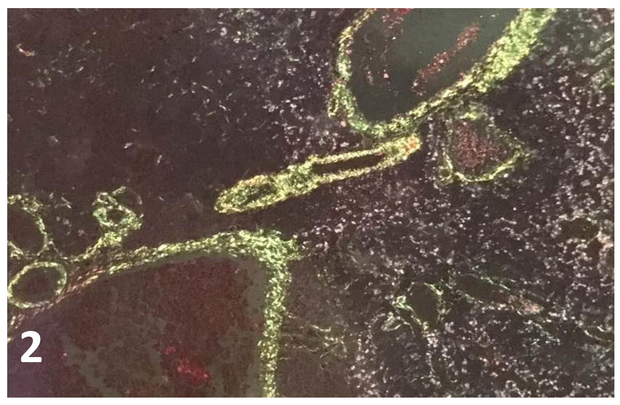
Selection of the organs

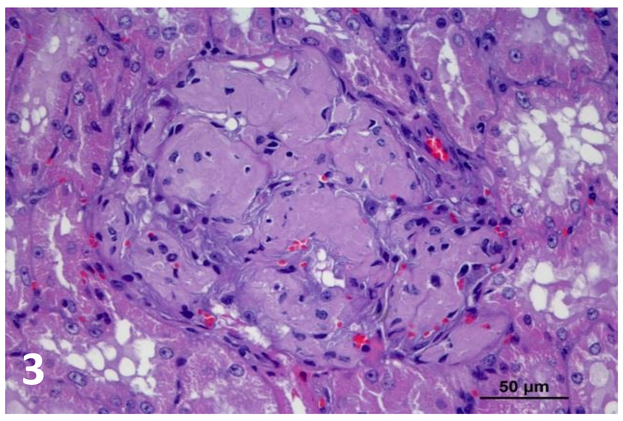
- Kidney, spleen and liver

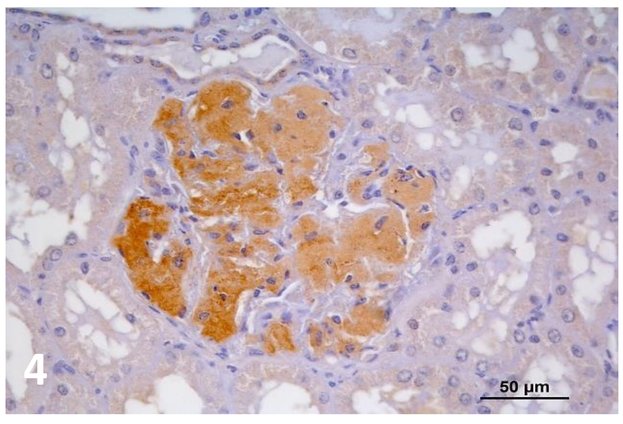
Histopathologic techniques

- Hematoxylin/eosin
- Congo Red
- Immunochemistry
  - Non-commercial rabbit polyclonal antibody
  - Mouse monoclonal antibody anti-Amyloid A Component
  - Rabbit polyclonal antibody anti- Amyloid Precursor Protein (APP)









1. *Kidney; Falco peregrinus. Congo red*
2. *Kideny; Falco peregrinus. Viewed in cross-polarized light. Congo red*
3. *Kidney; Ovis aries. Hematoxylin/eosin*
4. *Kidney; Ovis aries. Immunochemistry stain using a non-commercial rabbit polyclonal antibody (1:2000)*

Conclusions

- **Pathogenesis and clinical signs of amyloidosis vary in the different animal species, depending on the cause. Congo Red is still the most used stain to diagnose amyloidosis.**
- **A transmission between species has been proved However, the infection by ingestion of contaminate meat is unlikely.**
- **The best antibody to detect amyloid material is a non-commercial polyclonal rabbit antibody developed by the University of Zaragoza. The best results are obtained with a 1:2000 titer.**
- **The immunochemistry technique was only effective in *Bos primigenius*, *Capra aegagrus* and *Ovis aries*.**

References

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